



DIRECT SHIPPER AND FREIGHT FORWARDER'S
CARRIER SELECTION CRITERIA

By
SUCHEEDA ARUNPORNPHAISAL

A Final Report of the Six-Credit Course
SCM 2202 Graduate Project

Submitted in Partial Fulfillment of the Requirements for the Degree of
MASTER OF SCIENCE IN SUPPLY CHAIN MANAGEMENT

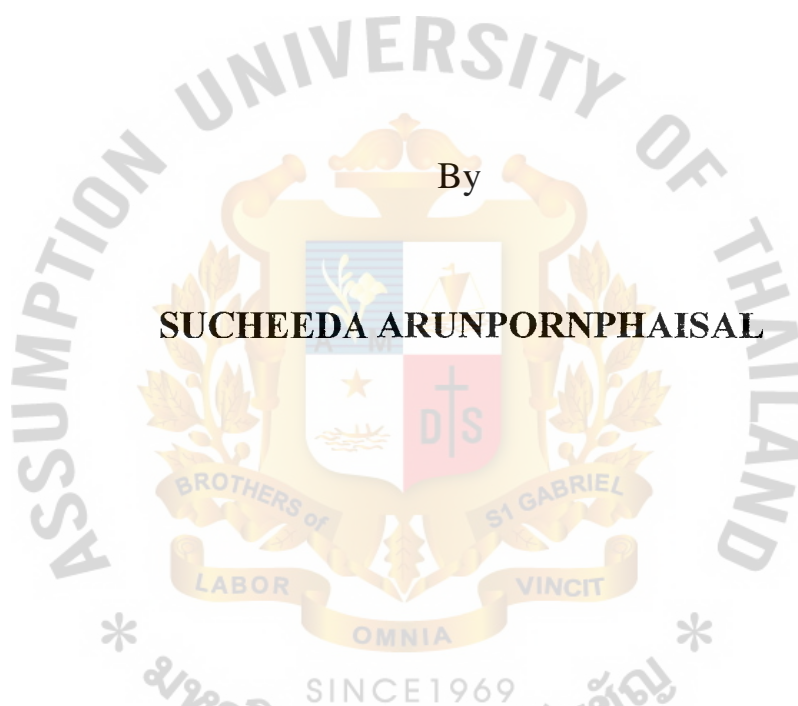
Martin de Tours School of Management
Assumption University
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March 2013

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Declaration of Authorship Form

I, Sucheeda Arunpornphaisal

declare that this thesis/project and the work presented in it are my own and has been generated by me as the result of my own original research.

Direct Shipper and Freight Forwarder's Ocean Carrier Selection Criteria.

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ACKNOWLEDGEMENTS

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I would like to express my sincere gratitude to Dr. Wuthichai Wongthatsanekorn, my advisor for his valuable suggestions, motivation, and kind assistance. Also my special thanks to Asst. Prof Brian Charles Lawrence, the chairman and Asst. Prof Dr. Nucharee Supatn, the committee member for their valuable comments about my graduate project.

Finally, I would like to thank my family, friends, colleagues, and all respondents who always provide the encouragement and support me to complete this research project.

Succheeda Arunpornphaisal

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March 2013

ABSTRACT

Ocean carrier acts as the major player in sea transportation across the borders. In Thailand, there are many criteria for ocean carrier service selection. There is no benchmark as each carrier has its different characteristics in 'Willis of payment terms, loading terms, Inco terms, as well as routing services.

This research was conducted to perform a hypothesis test on the relationship between ocean carrier selection criteria and the customer intention to choose ABC Company service. There are seven factors for ocean carrier selection criteria: Freight rates, Customer Service, Operation, Reputation, Infrastructure, Schedule, and IT and Communication. In addition this research also tested the perception of each variable between shippers and freight forwarders.

A questionnaire survey was applied as the methodology. The data was collected from 303 customers of ABC Company itself, including both shippers and freight forwarders. The respondents are all located in Bangkok area and support ABC Company under Cost Insurance and Freight Inco Tenn with Full Container Load (FCL) export shipment. The study showed that Reputation is the most influential factor for customers in selecting carriers and this applies to both shippers and freight forwarders. The analysis also revealed that Customer service and IT and Communication of ABC Company were perceived differently by each customer groups. In summary, customers select well-known ocean carrier service providers by evaluating all aspects. They do not make decision based on just single competitive advantage such as competitive freight rates, or short transit time service. Therefore, instead of improving only one function, ocean carrier's companies need to enhance overall performance to match with customer requirements and sustain its long term business.

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and hereby certify that the verbiage, spelling and format is commensurate with the quality
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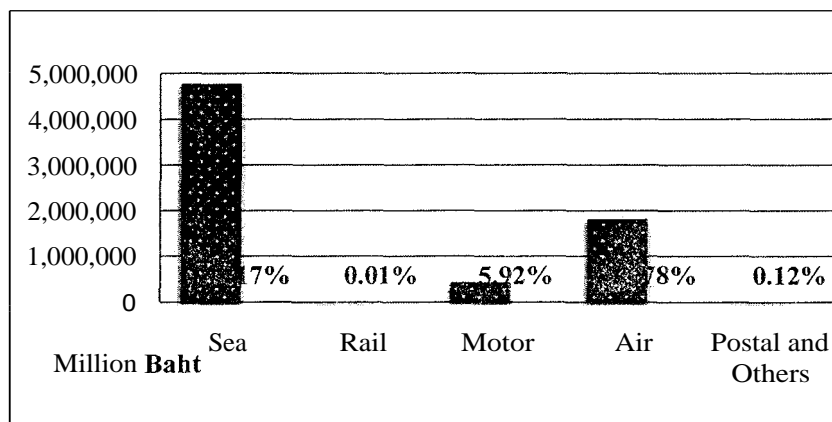
CHAPTER I

GENERALITIES OF THE STUDY

1.1 Background of the Study

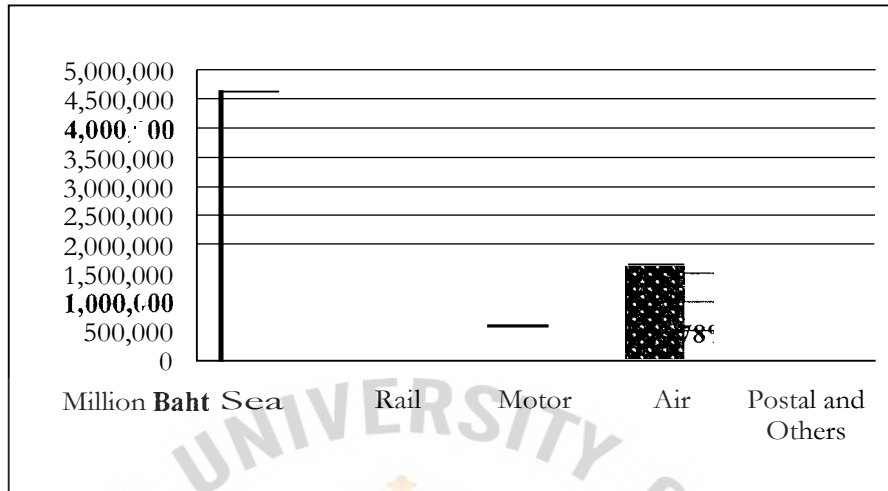
In Thailand sea transportation has played an important role of international mode in both export and import segments. Statistically, it has occupied 68,71% of import value, and 67.31% export value compared with air, motor, rail, and postal mode of transportation recorded from year 2011 which can be referred to Figure 1.1 and 1.2. The number of transportation modes used shown the significance of marine transportation, more than a half of international trade delivery occurs by sea and it can be assumed that although it takes more time to transport by marine, the lower logistics cost vessel delivery is still preferred. Furthermore, it was shown in figure 1.3 that the number of vessels and cargoes flowed since 1998 through both Klongtoey port (PAT) and Laem Chabang port (LCB) have continuously increased, and totals 79,071,473 tons. It cannot be denied that mentioned industry has been growing during the last 10 years. The growth in demand attracted a number of newcomers and resulted in intense competitive market although the huge amount of capital investment came from vessel construction, port and depot investment, as well as containers.

Figure 1.1: Mode of Transportation Used for Import in 2011



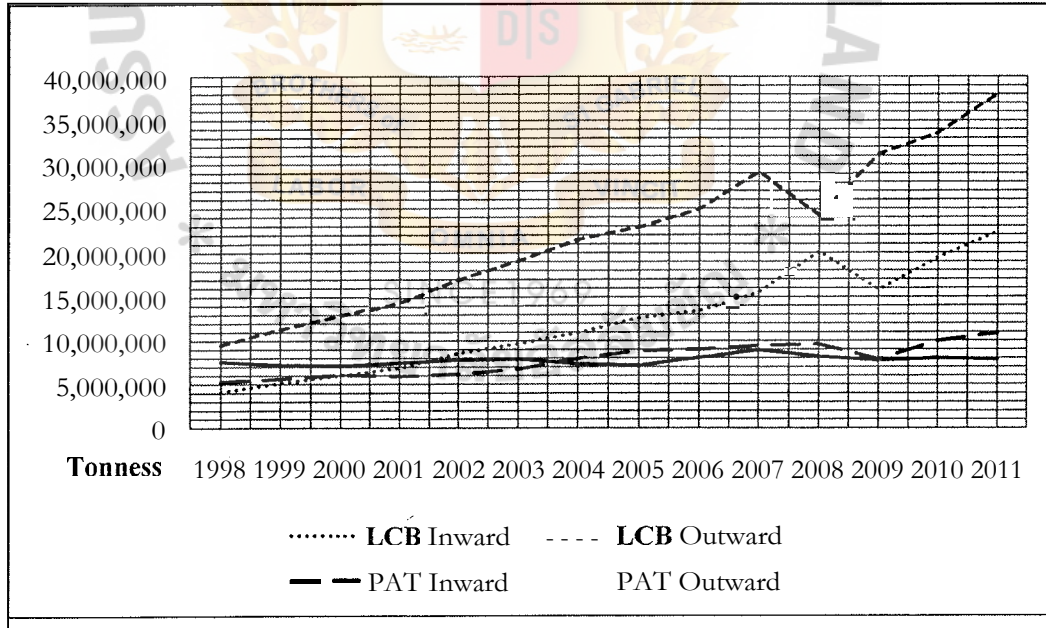
Source: Thailand Transport Portal (2012)

Figure 1.2: Mode of Transportation Used for Export in 2011



Source: Thailand Transport Portal (2012)

Figure 1.3: Inward and Outward Cargo flow through Port Authority of Thailand and Laem Chabang Loading Port, 1998-2011



Source: Marine Department of Thailand (2012)

Ocean carriers have been the major player in the mentioned industry, despite customer clearance paperwork; they provided empty containers with port to port delivery services for exporters and importers. Sellers need to pick up empty containers for their cargo stuffing, and then return laden containers at loading port on their own, while the processes of loading, unloading, cargo delivery, as well as other services related to these activities are responsible by ocean carriers. Ocean carrier, they commonly have different two customer segmentations, which are direct shipper/consignee and freight forwarder.

Ocean carrier service selection is one important activity related to logistics management. The decision making is more really based on the criteria which will differ for each customer. In Thailand the ocean carrier's selection criteria includes many factors as well as both internal and external environment such as world economic crisis, political situation, natural disaster which are uncontrollable factors that affect customers' decision during each period.

1.2 Statement of the Problem

Although there are other related factors which could affect customer's decision making, the ocean carrier selection criteria is one variable which can assist the company to operate the right market strategy. It is challenge to develop the effective and appropriate market strategy that matches with the Thai customers and strongly attracts them to retain their support towards the company.

Because of experience with ocean carrier for 40 years, ABC Company is considered to be one of the top ten ocean carriers in the sea transportation industry. And has their ocean carrier services which focus on Full container load (FCL) shipped out from Thailand to a total of five routing services. Their cargo is loaded from both Klongtoey and Laem Chabang ports and destined for Intra-Asia, Europe, Middle East, India, and Red sea destinations. Company has its target customers as direct shippers which refer to exporters, importers, and trader and freight forwarders included both global and local companies. Under Taiwanese nationality, the company creates loyalty, trust,

reliability, and good reputation. Besides these successes, profitability and growth are important.

The company should deeply understand about the ocean carrier service selection criteria which can guide the company's market strategy. Therefore, this research has been conducted to find out "What are the ocean carrier selection criteria of Shippers and Freight forwarders towards ABC Company services?"

1.3 Research Objectives

This research was conducted to find out the selection criteria of both customer types as well as the most important criteria for their decision. The three objectives are as follows:

1. To identify the criteria of ocean carrier selection toward the ABC Company services.
2. To explore the most impact ocean carrier selection criteria of direct shippers and freight forwarders toward the ABC Company services.
3. To explore the differences in ocean carrier selection criteria of direct shippers and freight forwarders towards the ABC Company services.

1.4 Scope of the Research

This research was conducted to examine what are those criteria in ocean carrier selection of direct shippers and freight forwarders of ABC Company's customers. There are seven factors that this study focuses on which are Freight rates, Customer service, Operation, Reputation, Infrastructure, Schedule, and IT and communication. Questionnaire survey is used as data collection method. Target respondents are the ABC Company's customers who are located in Bangkok area. For the direct shipper segment, the respondents would be export managers or officers, while the freight forwarder would be sales executives and the ocean freight center.

1.5 Significance of the Research

Results of the research in terms of selection criteria and most important factor in carrier selection of both direct shippers and freight forwarders allow the company to get a better understanding of the selection criteria and its customers, which can help the company to create more competitiveness with their existing services and policies. Furthermore, the result could help develop the right direction of market strategy as well as recognize which criteria need to be ranked as the first priority.

1.6 Limitations of the Research

Data will be collected from the customers who have particularly supported ABC Company which is located in Thailand during each month under Cost Insurance and Freight (CIF) Inco terms only because the persons who were authorized to select the ocean carriers commonly are at port of loading. The ocean carrier service includes only Full container load (FCL) outbound shipment from the port authority of Thailand (PAT) and Laem Chabang (LCB). There are other related factors including internal interruption or policies and environmental factors which have unexpected occurrences that can affect the company once they have done the survey.

1.7 Definition of Terms

CIF (Cost Insurance and Freight)

Set of three-letter trade terms reflecting business-to-business practice in contracts for the sale of goods. The price quoted by the seller includes insurance and all other charges up to the port of destination named. (International Chamber of commerce, 2010).

Carrier	Any person actually performing the carriage of the goods with his own means of transport (Bugden, 1999).
Container	Any container, trailer, transportable tank, flat or pallet, or any similar article used to consolidate goods and any ancillary equipment (Bugden, 1999).
Customer Service	Those activities designed to keep a customer happy (Wood & Johnsons, 1993). The carrier's ability to meet requirements at short notice, combined with an ability to understand problems and a willingness to help (Whyte, 1993).
Freight rates	All charges payable to the carrier in accordance with the applicable tariff and this Bill of Lading (Bugden, 1999).
Freight Forwarder	The person undertaking the planning and control of those logistics activity required in the movement of goods from the point of origin to the consignee (Bugden, 1999).
Infrastructure	The availability of cargo worthy and seaworthy containers. (Kannan, Bose, & Kannan, 2011).
Operation	Completion of customs and port foirnalities as well as all handling processes of transportation of cargo (Kannan et al., 2011).

Reputation	Professional appearance and image including financial stability and operating hours (Kannan et al., 2011).
Schedule	Sailing vessel routing including transit time and vessel frequencies (Kannan et al., 2011).
Shipper	The person (corporates or otherwise who may or may not be the customer) whose goods are dispatched for delivery by the carrier to the consignee (Foxton, Berry, Eder, Burrows, Smith, & Boyd , 2008)



CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter reviews the related literature and is composed of two main areas of interest which are as below:

- I. Carrier characteristics and Responsibilities.
- II. Selection Criteria toward ocean carrier.

2.1 Carrier characteristics and Responsibilities

Sea carrier includes the owner or the charterer who enters into the contract of carriage of goods cover the period from the time the goods are loaded until the time they are discharged from the ship with a shipper (Foxton et al., 2008). The service provided by each carrier is not only the transportation delivery, but also in administration services; which are transportation, administration, documentation handling, transport scheduling, tracking and tracing information, and delivery performance tool (Stefansson, 2006). According to Foxton et al. (2008), every goods shipment transport by each sea carrier in the operation of loading, handling, stowage, carriage and discharge shall be subjected to perform or undertake the responsibilities and liabilities.

Foxton, et al. (2008) stated that the carrier has the following responsibilities, which can be separated into three parts:

I. Before and at the beginning of the voyage

A ship needs to have a standard to be seaworthy. The vessel and equipment itself are in good order and this could keep the cargo reasonable safe, through the start of cargo loading, until vessel starts her voyage. Bugden (1999) agreed that carriers should properly manage, equip and supply the ship with bunkers, machinery, charts, pilot

books, seaman's and ship's documents to go through the calling port legally. Suitable refrigeration machinery with cool chambers for cargo to be carried, loaded, and safe without any defects for their receptions is needed. Carriage, and preservation is another responsibility.

II. The time the vessel starts her voyage

Carrier should carefully load, hand, stow, carry, keep, and discharge the goods they carried carefully.

III. Transport documents and Freights

After receiving the goods, carriers or ship agents issue a bill of lading to the shipper. The bill of lading is the evidence that the goods to be carried are received and shows the term of contract between the carrier and shipper and includes the nature of goods, condition of goods, name of shipper and consignee, port of loading and discharging, signature of carrier, date and period of delivery of the goods, and statement as carrier has no responsibility for these factors (Bugden, 1999). The properties also include documents of title and possession (Wronski, 1972).

Freight is all charges paid in currency specified in the bill of lading according to quantity or measurement without any reduction to the carrier. It can be prepaid by the shipper/seller, or paid at the destination by the consignee/buyer or the third party from the third place. It is common that the freight will be settled on shipment of goods, or in exchange of bill of lading, or before the departure of the vessel. Bugden (1999) confirmed that there are seven main elements of containerized tariffs under full container load (FCL) which are packaging cost of the container, haulage cost to container terminal at the loading port, terminal handling charge at both loading port and discharging port, ocean carriage, haulage cost to destination, and unpacking the containers.

2.2 Selection Criteria toward ocean carrier

Accordingly to Kannan et al. (2011), the ocean carrier selection criteria of the Indian shipper could be identified into seven factors. The results reduced the perception gap between ocean carrier and exporters which resulted in the effective strategies to improve their service quality and increase the competitive advantages.

The report applied the analytic hierarchy process (AHP) as the methodology. The mentioned selection criteria include seven factors which are Freight rates, Customer service, Operations, Reputation, Infrastructure, Scheduling, and IT and communication. These seven criteria in the India environment were adapted to be the list of studied selection criteria in this research for shippers and freight forwarders in Thailand as all factors are covered in all areas of the services.

2.2.1 Freight Rates

Kannan et al. (2011) confirmed that there are 45 different criteria in carrier selection process, and low freight rates and price flexibility are the top two important factors. Other researchers supported this. Transport price was still the most important factor for carrier selection compared with timing factors, security/ control factors, and service factors (Pedersen & Gray, 1998).

However, it was argued by McGinnis (1993) that there were other variables which were more important for customer selection rather than freight rates alone.

2.2.2 Customer service

The survey research of Matear and Gray (1993) supported the idea that carrier and timing characteristics which are included in customer service are the most important factors for shippers. They were composed of performance of service attribution, ability to monitor shipment with special requirement, fast response to any urgent and problem situation as well as short transit time with on-time delivery. Service variable

as speed and reliability were confirmed to be the top transport selection factors over freight rates, loss and damage, external market influences, inventories, and market competitiveness (McGinnis, 1993).

Jerman, Anderson, and Constantin (1993) also stated that co-operation between shippers and carriers was analyzed to be the main factor for carrier selection, including quality of service, quick trace shipment, and carrier assistance.

2.2.3 Operation 3733

Development of port terminal in terms of data transmission could bring many benefits as facilitating, discharging and loading containers, improvement of productivity, better management over storage of containers, accuracy and consistency information. (Kia, Shayan, & Ghotb, 2000) Operations was as considered to be one of ocean carrier services that was selected as the selection criteria in this research.

Slijper (1974) also stated that besides lower cost with sea transportation, emphasizes on handling operations which include quick clearance at ports of destinations which reduces the number of claim cost should be regarded as another advantage for each carrier.

2.2.4 Reputation

Kent and Parker (1999) identified five different areas of differences in perception between carriers and exporters which are as rate changes, service frequency, financial stability, service changes, and equipment availability. To create both short term and long term business relationship, exporter tended to have more concern with financial stability to avoid any sudden disruption. As financial stability is related to reputation of each carrier, the research tested if customers considered this criteria before the selection.

2.2.5 Infrastructure

Refer to Meixell and Norbis (2008), stated there are five transport challenges as capacity shortages, international growth, economies of scale and scope, security concerns, and environmental use. Equipment availability was emphasized to be the one of the carrier selection criterion and could be the competitive advantage for those carriers if there was no capacity limitation. Infrastructure was also considered to be an important factor as it shows the promptness of each carrier to serve their own services.

2.2.6 Schedule

Stank and Goldsby (2000) confirmed that in transportation decisions, the dock level operation should be taken into consideration. The effective and efficient loading plan, routing, and schedules routes because of supportive services provided by each carrier. The consistency in delivery times/ transit time, speed and flexibility, the absence of loss and damage were stated to be important purchasing requirements from the customer over price as they affect the carriers performance (Morash, 1987).

Transit time reliability and consistency were ranked to be the number one of service factors for ocean carrier selection agreed by both export/import and ocean carrier itself (Kent & Parker, 1999). Pearson and Semeijn (1999) stated that reliability and transit time were rated to be most important variable of logistics service provided by both large and small firms.

2.2.7 Information Technology (IT)

Some ocean carriers use computers for ocean logistics activities such as cargo tracking, shipment status checking, vessel schedule checking, or space booking. EDI (Electronic Data Interchange) is commonly developed as the carrier linkage software between carrier and client to facilitate the transportation process (Wood, 1990). Therefore, with the development of technology nowadays, IT is another important factor in this industry.

The study mainly reviews the research of Kannan et al. (2011), which discusses seven criteria and adds subfactors from other previous studies which is summarized in Table 2.1 Previous carrier selection criteria and influencing factors and Studied carrier selection criteria are shown in Table 2.2.

Table 2.1: Previous Carrier Selection Criteria/
Influencing Freight Service Factors

Year	Authors	Number of criteria	Carrier selection criteria/ Influenced freight service factors	Studied Criteria
1993	Matear and Gray	4	<ul style="list-style-type: none"> - Time characteristics - Carrier characteristics - Price characteristics - Route characteristics 	Schedule Customer Service Freight Rates Schedule
1993	McGinnis	7	<ul style="list-style-type: none"> - Speed and Reliability - Freight rates - Loss and damage - Company policy and customer influence - Inventories - Market competitiveness - External market influences 	Customer Service Freight Rates Operations Reputation Infrastructure - -
1993	Jerman et al.	6	<ul style="list-style-type: none"> - Charges and privileges - Past performance - Carrier image - Co-operation in rate adjustment - Routing capabilities - Knowledge 	Freight Rates Reputation Reputation Freight Rates Schedule Customer Service

Year	Authors	Number of criteria	Carrier selection criteria/ factors	Studied Criteria
1998	Pederson and Gray	4	<ul style="list-style-type: none"> - Time factors - Price factors - Security/ control factors - Service factors 	Schedule Freight Rates Operations Customer Service
1999	Kent and Parker	18	<ul style="list-style-type: none"> - Reliability - Equipment availability - Service frequency - Rate changes - Operational personnel - Transit time - Financial stability - Loss and damage - Expediting - Tracing - Service changes - Rates - Schedule flexibility - Carrier salesmanship - Line haul services - Special Equipment - PU and D - Claims 	Schedule Infrastructure Schedule Freight Rates Operations Schedule Reputation Operations - IT and Communication Schedule Freight Rates Schedule Customer Service Schedule Infrastructure - Operations
2011	Kannan et al.	7	<ul style="list-style-type: none"> - Freight Rates - Customer service - Operations - Reputation - Infrastructure - Scheduling - IT Orientation and communication 	Freight Rates Customer Service Operations Reputation Infrastructure Schedule IT and Communication

Source: The Authors

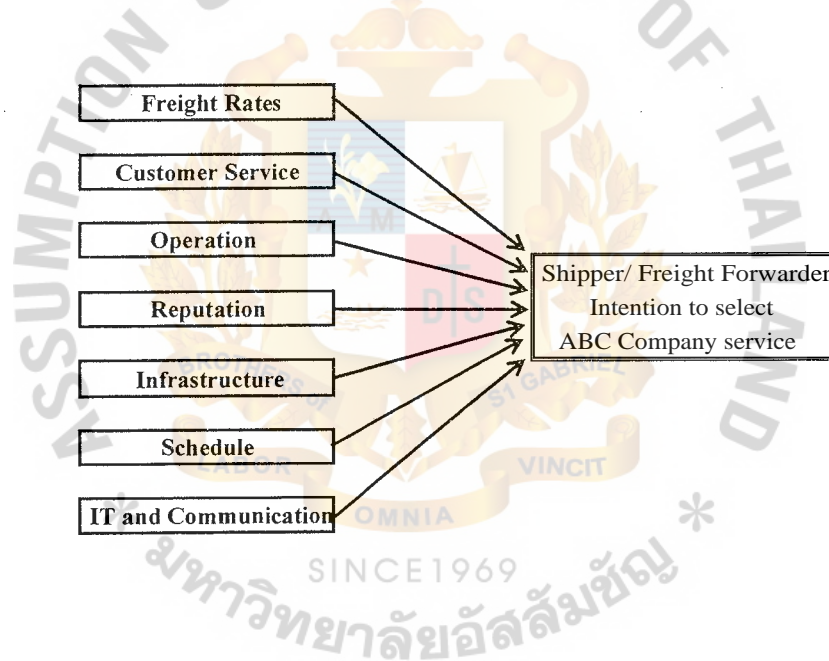
	McGinnis (1993)	Jernan et al.	Pederson Gray (1998)	Kent and Parker	Kannan et al.
Co	Route characteristics	Speed and Reliability	Routing capabilities	Time factors	Reliability Service frequency Transit time Service changes Schedule flexibility Line haul services
at					
Co					

Source: The authors

2.3 Conceptual Framework

The literature review indicates that the model of carrier selection criteria which would be referred to is from Kannan et al. (2011). All seven variables which are Freight rates, Customer service, Operation, Reputation, Infrastructure, Schedule, IT and communication have an influence on the shipper, freight forwarder intention to select ABC Company services (ocean carrier service) are summarized in Figure 2.1 as a conceptual framework.

Figure 2.1: Conceptual Framework



2.4 Research Hypotheses

This research consisted of three main Hypotheses which are the ocean carrier selection criteria from shippers, freight forwarders, and the differences between both types of customers. The hypotheses are summarized in Table 2.3 on the next page.

Table 2.3: List of Hypotheses

Hypotheses 1:	Freight rates (a), Customer service (b), Operation (c), Reputation (d), Infrastructure (e), Schedule (0, and IT and Communication (g) have a relationship with Shipper's intention to select ABC Company for Ocean Carrier's service.
Hypotheses 2:	Freight rates (a), Customer service (b), Operation (c), Reputation (d), Infrastructure (e), Schedule (0, arid IT and Communication (g) have a relationship with Freight forwarders' intention to select ABC Company for Ocean Carrier's service.
Hypotheses 3:	Perceptions for Freight rates (a), Customer service (b), Operation (c), Reputation (d), Infrastructure (e), Schedule (0, and IT and Communication (g) toward ABC Company Ocean Carrier's service of Shippers and Freight forwarders are different.

CHAPTER III

RESEARCH METHODOLOGY

This research was conducted by using the quantitative methodology to analyze and examine the ocean selection criteria of ABC Company' customers which includes shippers and freight forwarders. It also explores the differences between shippers and freight forwarders perceptions. This chapter explains the research design, target population, and analysis using the program.

3.1 Research design

A questionnaire survey is used as the research method in this study. The contents of questionnaire are close-ended questions. The questionnaires are distributed directly to each target ABC Company' customers at their office which is located in the Bangkok area.

3.2 Target population

Target respondents are ABC Company's customer including both shippers and freight forwarders who regularly have their shipment exported from Thailand under Cost Insurance and Freight (CIF) Inco terms. Accordingly to the company records, the total population is 380 companies located in Bangkok, which is divided into 281 freight forwarders and 99 shippers. To determine the sample size when population is known, 95 % confidence level and 5% error were allowed. Since the population is divided into two subgroups, stratified sampling is used by applying the formula from Yamane Taro (1967) which is as follows:

Given n_1 : The sample size of the smaller group (shippers)

$$\text{Formula } n_1 = \frac{N}{1+N(e)^2}$$

$$n_1 = \frac{99}{1+99(0.05)^2} = 79$$

While n The sample size of the larger group (freight forwarders)

$$n_2 = \frac{79}{99} \times 281 = 224$$

303 respondents answered the questionnaire survey, which totals 79% of total number of ABC Company's customers whose shipments are under Cost Insurance and Freight (CIF) Inco terms.

3.3 Research tools

Questionnaires have been used as the research tool for this project which was handed directly to the respondents. The questions would be designed according to the literature review and the conceptual framework. The questionnaires were translated into two languages namely; English and Thai.

PART A: Consists of respondent's demographical data and ranking the importance of the ocean carrier selection criteria.

PART B: Consists of a five Point 1-5 Likert scale to rate the customers selection criteria towards ocean carriers.

PART C: Consists of a five Point 1-5 Likert scale to rate the customers intention to select ocean carriers.

Part A questions measured customer export's behavior defined as demographical data as well as an understanding of the importance of each criteria using ranks from 1 (Most important) to 7 (Less important). The second part and third part studied the selection criteria of each type of customer and customer intention to select ABC Company services using Likert scales ranging from 1 (Strongly disagree) to 5 (Strongly agree). The measurement for items in each criterion is referred to the Theoretical framework.

3.4 Reliability of pre testgh

To ensure that the questionnaire is reliable for conducting the research, Cronbach's alpha will be used for consistency analysis. 50 questionnaires were distributed for testing reliability and Table 3.1 shows that all seven variables are reliable since an acceptable score of higher than 0.7 was obtained (George & Mallery, 2003).

Table 3.1: Reliability Results (See Appendix C)

Variables	Cronbach's Alpha
Freight rates	0.776
Customer Service	0.864
Operation	0.759
Reputation	0.816
Infrastructure	0.789
Schedule	0.824
IT and Communication	0.767

3.5 Data collection process

Stratified sampling is applied in this research as there are two different subgroups of respondents which are shippers and freight forwarders. Questionnaires are handed to target customer at the area of Bangkok metropolitan according to the list of ABC Company's customers. The data collection process was to be completed within one to two weeks.

3.6 Data analysis

The SPSS program will be used as a survey methodology and data analysis tool. The research consisted of three different analysis tests. Descriptive analysis showed the number of respondents defined as shippers and freight forwarders, and the frequency of export shipment. Multiple regressions was used to analyze the relationship between seven independent variables which are the selection criteria. The dependent variable is the intention to select ABC Company service. Lastly the Independent sample T-Test

was used to understand the differences in each seven selection criteria between shippers and freight forwarders toward ABC Company services.

3.6— Descriptive Analysis

Descriptive analysis quantitatively describes the respondents' profile. It also shows the Lumber of respondents for shippers and freight forwarders, number of shipment exported from Thailand per month and number of job positions.

3.6.2 Multiple regressions Analysis

Regression was used to quantify the linear relationship between variables. Since the research studied whether seven independent variables of selection criteria have a relationship with one dependent variable which is customer intention to select ABC Company service, multiple regression analysis was applied which is given in hypothesis 1 and 2 and follow the equation below:

$$Y = 130 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + E$$

Where

Y: Customer intention to select ABC Company service

β_1 : Coefficient of independent variable X1

132: Coefficient of independent variable X2

β_3 : Coefficient of independent variable X3

134: Coefficient of independent variable X4

135: Coefficient of independent variable X5

136: Coefficient of independent variable X6

137: Coefficient of independent variable X7

X1: Freight rates

X2: Customer service

X3: Operation

X4: Reputation

X5: Infrastructure

X6: Schedule

X7: IT and communication

c. Random error

Customer intention to select ABC Company service is dependent variable while seven selection criteria; Freight rates, Customer service, Operation, Reputation, Infrastructure, Schedule, and IT and Communication are independent variable in above equation.

P_0 is the intercept or constant where the line intercepts the vertical axis at $x = 0$. While f_3 Coefficient or slope show the relationship between each independent variable and dependent variable.

3.6.3 Independent Sample T Test Analysis

Independent sample T Test was used to compare the mean of two variables which is in Hypothesis 3 whether they differ or equivalent. In this research, we have tested the differences in selection criteria between direct shipper and freight forwarder in seven selection variables which are Freight rates, Customer service, Operation, Reputation, Infrastructure, Schedule, and IT and Communication.

3.7 Summary

In this research, questionnaire survey was applied as the method to analyze the relationship between each variable, as well as identify the differences between each variable of direct shipper and freight forwarder as both types of ABC Company's customers.

CHAPTER IV

PRESENTATION AND CRITICAL DISCUSSION OF RESULTS

This chapter concluded the results of the data analysis from the questionnaire surveys. The questionnaires were collected from 303 respondents, who are ABC Company' customers who have the authority to select ocean carrier services. Their offices are located in the Bangkok area. The analysis is presented in four parts: firstly the respondents' profile; secondly the ranking of important factors of ocean carrier selection criteria; thirdly the analysis of relationship between dependent factors which are Freight rates, Customer service, Operation, Reputation, Infrastructure, Schedule, and IT and Communication and Customer intention to select ABC Company service for both customer groups; and finally the analysis of differences between shippers and freight forwarders in perception for each of the seven factors of selecting ABC Company services.

4.1 Sample Profiles

The sample profiles are shown in Table 4.1:

Table 4.1: Respondents' Characteristics

Characteristics	Shipper		Freight Forwarder	
	Number	Percentage	Number	Percentage
Respondents	79	26.07%	224	74.29%
Shipment Volume per month (Containers)				
Less than 15	27	34.18%	22	9.82%
16-30	17	21.52%	67	29.91%
31-50	21	26.58%	87	38.84%
More than 50	14	17.72%	48	21.43%
Job Position				
Management Level	11	13.92%	20	8.93%
Supervisor Level	22	27.85%	82	36.61%
Officer	45	56.96%	118	52.68%
Others	1	1.27%	4	1.79%

Table 4.1 shows that using the stratified sampling method, respondents are divided into two different groups as shippers who are 26.07 percent and freight forwarders who are 74.29 percent of the total.

Meanwhile, 34.18 percent of shipper respondents had their monthly export shipments volume loaded from Thailand in less than 15 containers, 26.58 percent had 16-30 containers, 21.52 percent had 31-50 containers, and 17.72 percent had more than 50 containers.

For freight forwarder respondents, 38.84 percent had their export shipments at a volume of 31-50 containers per month, 29.91 percent had between 16-30 containers, 21.43 percent had more than 50 containers, and 9.82 percent had less than 15 containers.

It can be concluded that ABC Company's customers who act as shippers are ranged from small to large companies. While freight forwarders' customers are mainly medium companies looking at their export shipments per month.

In addition, most of shipper respondents were officers (56.96 percent), supervisors (27.85 percent), a management level (13.92 percent) and other (1.27 percent) job positions.

For freight forwarder respondents 52.68 percent of them were officers, 36.61 percent were supervisors, 8.93 percent were management level and the remaining 1.45 were from other job position.

It can be concluded that the authority to select ocean carrier services for both shippers and freight forwarders is currently transferred from management or supervisory levels to operational levels. Each of them can make a decision to select ocean carrier services without the approval from the top management.

4.2 Hypotheses Testing

There are three hypotheses proposed to support the research objectives. Hypotheses 1 presents the relationship between seven independent variables and customer intention to select ABC Company for Ocean Carrier's service of shipper respondents. While Hypotheses 2 proposed the relationship between seven independent factors and customer intention to select ABC Company for Ocean Carrier's service for freight forwarder respondents. Finally, Hypotheses 3 tested the differences of perception of ocean carrier selection criteria between shippers and freight forwarders who are ABC Company' customers, for each seven variables which are Freight rates, Customer service, Operation, Reputation, Infrastructure, Schedule, and IT and Communication.

4.2.1 Relationship between Seven Independent variables and Customer Intention to select ABC Company for Ocean Carrier's service

All seven Independent factors: Freight rates, Customer service, Operation, Reputation, Infrastructure, Schedule, and IT and Communication have an influence on Customer Intention to select ocean carrier selection were analyzed by using the Multiple regression analysis for Hypotheses 1 and 2 as indicated below.

H1: Freight rates (a), Customer service (b), Operation (c), Reputation (d), Infrastructure (e), Schedule (f), and IT and Communication (g) have a relationship with Shipper's intention to select ABC Company for Ocean Carrier's service.

The analysis results are shown in Table 4.2.

Table 4.2: Test Relationship between Independent Factors and Shipper Intention to Select ABC Company

Independent factors	Unstandardized Coefficients (B)	Standardized Coefficients (Beta)	t	P-Value
(Constant)	.279		.755	.453
Freight Rates	.028	.034	.372	.711
Customer Service	.129	.137	1.454	.150
Operation	-.030	-.025	-.253	.801
Reputation	.374	.395	3.241	.002
Infrastructure	-.024	-.024	-.195	.846
Schedule	.400	.327	2.541	.013
IT and Communication	.073	.082	.834	.407

- Dependent variable: Intention to select ABC Company service
- $F = 17.518$; $p < 0.0001$
- Adjusted $R^2 = 0.597$

Table 4.2 indicates the F score was 17.518 and P-value was 0.000 which is less than 0.01. Thus, Freight rates, Customer service, Operation, Reputation, Infrastructure, Schedule, and IT and Communication have a relationship with shippers intention to select ABC Company for Ocean Carrier's service. The 0.597 of adjusted R square means that there is 59.7 percent of variance in customers' intention to select ABC Company and can be explained by the seven factors. The remaining 40.3 percent can be affected by other factors.

Moreover, there is one variable; Reputation which has a p-value of less than 0.01 while another six variables; Freight rates, Customer service, Operation, Infrastructure, Schedule, and IT and Communication have their p-value of higher than 0.01. Thus, there is significant relationship between Reputation and shipper intention to select ABC Company services ($\beta=0.395$, $p<0.01$). However, other factors Freight rates ($\beta=0.034$, $p>0.01$), Customer service ($\beta=0.137$, $p>0.01$), Operation ($\beta=-0.025$, $p>0.01$), Infrastructure ($\beta=-0.024$, $p>0.01$), Schedule ($\beta=0.327$, $p<0.01$) and IT and Communication ($\beta=0.104$, $p>0.01$) were not influenced. Hence, Hypotheses 1 was partially supported by the data. Reputation variable has influenced on shippers

intention to select ABC Company services while Freight rates, Customer service, Operation, Infrastructure, Schedule, and IT and Communication have no influence.

H2: Freight rates (a), Customer service (b), Operation (c), Reputation (d), Infrastructure (e), Schedule (f), and IT and Communication (g) have a relationship with Freight forwarders' intention to select ABC Company for Ocean Carrier's service.

The analysis results are shown in Table 4.3.

Table 4.3: Test Relationship between Independent Factors and Freight Forwarder Intention to Select ABC Company

Independent Factors	Unstandardized Coefficients (B)	Standardized Coefficients (Beta)	t	P-value
(Constant)	.662		2.931	.004
Freight Rates	.095	.090	1.481	.140
Customer Service	.074	.086	1.220	.224
Operation	.146	.160	2.259	.025
Reputation	.188	.187	2.633	.009
Infrastructure	.110	.117	1.758	.080
Schedule	.185	.188	2.480	.014
IT and Communication	.060	.065	.973	.331

a. Dependent variable: Intention to select ABC Company service

b. $F = 29.664$; $p < 0.0001$

c. Adjusted $R^2 = 0.474$

Table 4.3 indicates that the F score was 29.664 and p-value was 0.000 which is less than 0.01. Thus, Freight rates, Customer service, Operation, Reputation, Infrastructure, Schedule, and IT and Communication have a relationship with the freight forwarders intention to select ABC Company for Ocean Carrier's service. The 0.474 of adjusted R square means that there was 47.4 percent of variance in

customers' intention to select ABC Company service as explained by the seven factors. The remaining 52.6 percent can be affected by other factors.

Moreover, there is one variable; Reputation which has a p-value less than 0.01 while another six variables; Freight rates, Customer service, Operation, Infrastructure, Schedule, and IT and Communication have their p-value higher than 0.01. Thus, for Freight forwarders intention to select ABC Company services, Reputation has significantly influenced customers intention to select ABC Company service ($t=0.187$, $p<0.01$). However, other factors Freight rates ($t=0.90$, $p>0.01$), Customer service ($t=0.086$, $p>0.01$), Operation ($\beta=0.160$, $p<0.01$), Infrastructure ($P=0.117$, $p>0.01$), Schedule ($t=0.188$, $p<0.01$) and IT and Communication ($\beta=0.065$, $p>0.01$) have no influence. Hence, Hypotheses 2 was partially supported by the data. Reputation variable has influence on freight forwarders intention to select ABC Company service while Freight rates, Customer service, Operation, Infrastructure, Schedule, and IT and Communication have no influence.

4.2.2 Comparison of perception between Shippers and Freight forwarders on each of the Seven Independent variables towards ABC Company Ocean Carrier's services

To make a comparison between each customer group which are shippers and freight forwarders perception of the seven Independent variables, the Independent Sample T Test was used for Hypotheses 3.

H3: Perception of Freight rates (a), Customer service (b), Operation (c), Reputation (d), Infrastructure (e), Schedule (f), and IT and Communication (g) toward ABC Company Ocean Carrier's service of Shippers and Freight forwarders are different.

The analyses of results are shown in Table 4.4.

Table 4.4: Comparison Test between Shippers and Freight Forwarders in Perception of the Independent Variables

	Mean		t-test for Equality of Means	
	Shipper	Freight Forwarder	t	P-value (2-tailed)
Freight Rates	3.2057	3.3694	-2.072	0.041
Customer Service	3.8481	4.1105	-3.923	0.000
Operation	3.5697	3.6530	-1.378	0.169
Reputation	3.6668	3.7176	0.834	0.405
Infrastructure	3.5485	3.5269	0.347	0.728
Schedule	3.5949	3.7080	-1.993	0.047
IT and Communication	3.3675	3.8158	-6.022	0.000

Table 4.4 indicates that there are no differences in perception of the five independent variables toward ABC Company services between shippers and freight forwarders which are Freight rates, Operation Reputation, Infrastructure, and Schedule as all of them have their p-value higher than 0.01, ($p=0.041$), ($p=0.169$), ($p=0.405$), ($p=0.728$), and ($p=0.047$) respectively. On the other hand, the remaining variables; Customer service and IT and Communication have a p-value of less than 0.01 ($p=0.000$) which means that shippers and freight forwarders have different perception of Customer service and IT and Communication towards ABC Company services. These two variables were perceived as higher by freight forwarders than direct shippers. Thus, Hypotheses 3 was partially supported by the data.

4.3 Conclusion of the Hypotheses Testing

The result findings were separately presented into two groups; shippers and freight forwarders respondents. Under both shipper and freight forwarder respondents, the results indicated the positive influences of Reputation variable towards intention to select ABC Company for Ocean Carrier's services. Therefore, Hypotheses 1 and 2 are

partially supported the data. One variable supported Hypotheses 1; Reputation while Freight rates, Customer service, Operation, Infrastructure, Schedule, and IT and Communication do not support Hypothesis 1. On the other hand, there is also one variable that supports Hypotheses 2; Reputation while Freight rates, Customer service, Operation, Infrastructure, Schedule and IT and Communication do not support Hypothesis 2.

Furthermore, each respondent group perceives each Independent variable differently. There are two variables; Customer service and IT and Communication which shippers and freight forwarders perceived differently toward ABC Company services. Thus, it could be concluded that Hypotheses 3 has partially supported by Customer service and IT and Communication while Freight rates, Operation Reputation, Infrastructure, and Schedule are not. The summary of three hypotheses testing is shown in Table 4.5 below.

Table 4.5: Summary of Hypotheses Testing

Hypotheses	Statements	Table	Results
H1	Freight rates (a), Customer service (b), Operation (c), Reputation (d), Infrastructure (e), Schedule (f), and IT and Communication (g) have a relationship with Shipper's intention to select ABC Company for Ocean Carrier's service.	4.2	Partially Supported
H1 a	Freight rate has a relationship with Shipper's intention to select ABC Company service.		Not supported
H1 b	Customer service has a relationship with Shipper's intention to select ABC Company service.		Not supported
H1 c	Operation has a relationship with Shipper's intention to select ABC Company service.		Not supported
H1 d	Reputation has a relationship with Shipper's intention to select ABC Company service.		Supported

Hypotheses	Statements	Table	Results
H1e	Infrastructure has a relationship with Shipper's intention to select ABC Company service.	4.2	Not supported
H1f	Schedule has a relationship with Shipper's intention to select ABC Company service.		Not supported
H1g	IT and Communication has a relationship with Shipper's intention to select ABC Company service.		Not supported
H2	Freight rates (a), Customer service (b), Operation (c), Reputation (d), Infrastructure (e), Schedule (f), and IT and Communication (g) have a relationship with Freight forwarders' intention to select ABC Company for Ocean Carrier's service.	4.3	Partially Supported
H2a	Freight rate has a relationship with Freight forwarders' intention to select ABC Company service.		Not supported
H2b	Customer service has a relationship with Freight forwarders' intention to select ABC Company service.		Not supported
H2c	Operation has a relationship with Freight forwarders' intention to select ABC Company service.		Not supported
H2d	Reputation has a relationship with Freight forwarders' intention to select ABC Company service		Supported
H2e	Infrastructure has a relationship with Freight forwarders' intention to select ABC Company service		Not supported

Hypotheses	Statements	Table	Results
H2f	Schedule has a relationship with Freight forwarders' intention to select ABC Company service	4.3	Not supported
H2g	IT and Communication has a relationship with Freight forwarders' intention to select ABC Company service		Not supported.
H3	Perceptions for Freight rates (a), Customer service (b), Operation (c), Reputation (d), Infrastructure (e), Schedule (f), and IT and Communication (g) toward ABC Company Ocean Carrier service of Shipper and Freight forwarder are different.	4.4	Partially Supported
H3a	Freight rate of Shipper and Freight forwarder toward ABC Company service is different.		Not supported
H3b	Customer service of Shipper and Freight forwarder toward ABC Company service is different.		Supported
H3c	Operation of Shipper and Freight forwarder toward ABC Company service is different.		Not supported
H3d	Reputation of Shipper and Freight forwarder toward ABC Company service is different.		Not supported
H3e	Infrastructure of Shipper and Freight forwarder toward ABC Company service is different.		Not supported
H3f	Schedule of Shipper and Freight forwarder toward ABC Company service is different.		Not supported
H3g	IT and Communication of Shipper and Freight forwarder toward ABC Company service is different.		Supported

CHAPTER V

SUMMARY FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This chapter represents the summary of the findings and conclusions from the hypotheses testing, theoretical implications, and managerial implications which are related to ABC Company as well as the limitations and recommendations for future research.

5.1 Summary of the Findings

The objective of the study is to explore the relationship between the customers intention to select ABC Company services and ocean carrier selection criteria which consists of seven independent factors: Freight rates, Customer service, Operation, Reputation, Infrastructure, Schedule, and IT and Communication between each customer group which are shippers and freight forwarders. The results showed that shippers intention to select ABC Company service was significantly influenced by Reputation. Reputation includes quality service, employee competence and knowledge and the operating hours. Thus these factors are important for shippers to select ABC Company services.

Freight forwarders respondents showed the result for their intention to select ABC Company service influenced by the same factor as shippers respondents which is Reputation. Moreover there is significant relationship between Reputation and freight forwarders intention to select ABC Company service as well.

In addition, both shippers and freight forwarders respondents perceived all seven ocean carrier selection criteria differently toward ABC Company services. The results partially support the data as there are two variables that freight forwarders perceive as important, freight forwarders believe that ABC Company provides better service in

Customer service and IT and Communication, while direct shipper perceived these two factors as less important.

5.2 Conclusions

The results of the relationship between seven ocean selection criteria and customer intention to select ABC Company services are similar for both shippers and freight forwarder respondents. Both respondents select ABC Company services by focusing on Reputation. This may be explained by stating that ABC Company has a good reputation in service quality, employee competency as well as in providing longer operating hours.

The findings explain that the ocean carrier selection criteria currently have changed to emphasize on Reputation. Low cost is not the major consideration when they select ocean carrier services, but the ocean carrier's image which includes company performance, financial stability, the perception of customers toward ocean carrier in the market are more important. Besides, service quality; composed of operation and documentation process is considered to be another important factor that each customer. The characteristics of ocean carrier services need the support from ocean carrier during operating hours. With longer operating hours provided compared with its competitors, the company can create competitive advantages. Furthermore, high employee competency of customer services and sales support the company to create trust and reliability on services. Therefore, the criteria is not just one factor but a combination of many factors which affects the overall company.

Moreover, the perception of each ocean carrier selection criteria between shippers and freight forwarders toward ABC Company service are different. Freight forwarder believe that Customer service and IT and Communication of ABC Company are better in terms of personal attention, fast responsiveness, reliability, and good relationship as well as new service announcement via website, track and trace system, and document accuracy, but shippers perceive this differently.

Normally shippers get more support from ocean carriers in terms of being service minded compared to freight forwarders as they are direct exporters not the middle man. Since each company treats each customer type similarly, it creates the difference in customer perception for each group. Moreover, IT and communication refer to the nature of Thai shippers since most of them prefer to work in the old way rather than with high technology which make them more causes complexity. Shippers perceive ABC Company differently comparing to freight forwarders.

Customers expect good ocean carrier services. One factor such as, competitive freight rates, short transit time may not be that important, more attention is given to the overall ocean carriers performance which is Reputation.

5.3 Theoretical Implications

The framework summarized in this research was adapted from Kannan et al. (2011) because of seven independent variables; Freight rates, Customer service, Operation, Reputation, Infrastructure, Schedule, and IT and Communication which have an influence on dependent variable, Ocean carrier selection could be applied to the transportation industry under different modes, such as air freight carrier service.

All seven selection criteria do not fully match with air freight carrier services. Reputation should be reconsidered to focus on both air freight agents and airline as unrelated activities of airline operations are responsible solely by air freight forwarders. Infrastructure which was concerned with containers should be revised according to the air shipment characteristics including air freight agent's warehouse. But Freight Rates, Customer service, Operation, Schedule, and IT and Communication could be applied similarly with ocean carrier services. The dependent variable could be reviewed to be air freight agent with differences in environmental factors, market, cargo, as well as the air transportation characteristics. Therefore, the seven factors could be applied, but there are two factors which are Reputation and Infrastructure that should be reviewed to match with the air transportation industry.

5.4 Managerial Implications

The findings of the research show that Reputation influences shippers and freight forwarders intention to select ABC Company. Therefore, the management teams should focus on these factors. They should encourage their staff to pay more attention to company image including improving service quality, increasing employee competency as well as providing longer operating hours to improve business performance, increase competitive advantages and sustain their long term relationship with customers.

This research shows ABC Company how to recognize and understand its competitive advantages which lead to an effective marketing strategy. The proposal for each customer should focus on the company's good images as reflected in overall performance. To expand and secure business, good reputation can be increased which is regarded as the strength of ABC Company. However, overall performance certainly comes from the cooperation of each department; therefore, cross function should be promoted simultaneously with company performance.

5.5 Limitations and Recommendations for Future Research

This research was designed to study the ocean carrier selection criteria which influences customers intention to select FCL service under Cost and Freight payment terms only. The contexts of factors and measurement items were constructed in the area of marine transportation as well as matched with the shipper and freight forwarder respondents. Thus, the framework constructed may not fully match with other related businesses in different environment, business operations, and periods of time.

In the future, sea transportation may grow and expand continuously with the global environmental changes. Thus, ABC Company should adapt itself to operate and survive in profitable way as well as increase its competitive advantages. For future research, study of service quality with other measurement can generate more

understanding of customer requirements besides ocean carrier selection criteria. The designed framework could also be applied in the same industry with specific commodities, as it could create more understanding of each specific market and enhance the business performance of logistics service providers.



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APPENDIX A

Questionnaire (English version)

Questionnaire (English version)



This questionnaire has been developed under the purpose of education as parts of a Master degree graduate project of Supply Chain Management Program at Assumption University and the information will be treated with high confidentiality.

PART 1: Company Profile

Please answer the following questions by mark "X" in the box given below and do kindly answer truthfully and complete all questions.

1. Your position

☐ Management Level

☐ El Supervisor Level

☐ Officer

☐ Others _____

2. Type of business

☐ Direct Shipper

☐ El Freight Forwarder

3. Shipment volume export from Thailand per month

☐ Less than 15

☐ 16-30

☐ 31-50

☐ El More than 50 shipments

4. Please rank the important of ocean carrier selection criteria (1= Most Important, 7= Less important)

_____ Freight rates

_____ Infrastructure

_____ Customer Service

_____ Schedule

_____ Operation

_____ IT and Communication

_____ Reputation

PART 2: Ocean Carrier Selection criteria toward ABC Company

Please evaluate ABC Company service carefully by circling on the number that is closest to your opinion. The numbers of rating scale represent from 1 (Strongly disagree) to 5 (Strongly agree).

5. Freight Rates	Strongly Disagree				Strongly Agree
5.1 ABC Company offers lower freight rates comparing to other companies.	1	2	3	4	5
5.2 ABC company offers more special and discount freight rates to customer comparing to other companies.	1	2	3	4	5
5.3 ABC company offers more flexible and negotiable freight rates comparing to other companies.	1	2	3	4	5

Freight Rates	Strongly Disagree		Strongly Agree		
5.4 ABC Company offers lower local surcharge (B/L, THC, Seal) to customer comparing to other companies.	1	2	3	4	5
6. Customer Services	Strongly Disagree		Strongly Agree		
6.1 Personal attention of customer services of ABC Company is higher comparing to other companies.	1	2	3	4	5
6.2 ABC Company's customer service has faster responsiveness comparing to other companies.	1	2	3	4	5
6.3 ABC Company's Customer service is more reliable comparing to other companies.	1	2	3	4	5
6.4 The relationship between ABC Company's customer services and your company is better comparing to other companies.	1	2	3	4	5
7. Operations	Strongly Disagree		Strongly Agree		
7.1 The number of complaint in operation handling of ABC Company is lower comparing to other companies.	1	2	3	4	5
7.2 ABC Company has higher safety handling operation comparing to other companies.	1	2	3	4	5
7.3 ABC Company's service has lower level of damages and loss comparing to other companies.	1	2	3	4	5
8. Reputation	Strongly Disagree		Strongly Agree		
8.1 ABC Company has provided better quality service comparing to other companies.	1	2	3	4	5
8.2 ABC Company's employee competence and knowledge is more reliable comparing to other companies.	1	2	3	4	5
8.3 ABC Company serves longer operation hour comparing to other companies.	1	2	3	4	5
9. Infrastructure	Strongly Disagree		Strongly Agree		
9.1 ABC Company provides better condition of containers comparing to other companies.	1	2	3	4	5
9.2 ABC Company can provide better availability of special equipment (Open top/ Flat Rack) comparing to other companies.	1	2	3	4	5

Item	Strongly Disagree			Strongly Agree	
9.3 ABC Company can provide better availability of equipment (Dry Container) comparing to other companies.	1	2	3	4	5
10: Schedule	Strongly Disagree			Strongly Agree	
10.1 Sailing schedule of ABC Company is more reliable comparing to other companies		2	3	4	
10.2 Transit time of vessel of ABC Company is more reliable comparing to other companies.		2	3	4	5
10.3 Sailing schedule of ABC Company per week has more frequency comparing to other companies.	1	2	3	4	
10.4 ABC Company provides more flexible schedule for returning laden container comparing to other companies.					5
10.5 ABC Company service has shorter transit time service comparing to other companies.				4	5
11: Information and Communication	Disagree			Strongly Agree	
11.1 New service trade announcement by ABC Company via website is updated faster comparing to other companies.	1	2	3	4	5
11.2 Shipment tracking and tracing provided by ABC Company is more up-to-date comparing to other companies.	1	2	3	4	5
11.3 Documents' (B/L, Certificate, and Invoice) accuracy of ABC company is higher comparing to other companies.	1	2	3	4	5

PART 3: Customer intention to select ocean carrier

Please evaluate your selection intention toward ABC Company carefully by circling on the number that is closest to your opinion. The numbers of rating scale represent from 1 (Strongly disagree) to 5 (Strongly agree).

Customer intention to select ABC Company as our ocean carrier	Strongly Disagree ← → Strongly Agree				
12.1 Next time you will select ABC Company as the first priority.	1	2	3	4	5

Customer intent kin to select ABC your ocean carrier					
12.2 You will recommend other companies to use ABC company service.				5	
12.3 You will sustain your volume shipment using service of ABC Company.			3	4	5

Thank you for your kind cooperation





APPENDIX B

Questionnaire (Thai version)

Questionnaire (Thai version)

แบบสอบถามความคิดเห็นในการเลือกสายเดินเรือ



แบบสอบถามนี้จัดทำขึ้นเพื่อจุดประสงค์ในการศึกษาซึ่งเป็นส่วนหนึ่งของรายงานการสำเร็จการศึกษาระดับปริญญาโทของมหาวิทยาลัยอัสสัมชัญ ข้อมูลที่ได้จากการตอบแบบสอบถามของท่านจะถูกนำเสนอในภาพรวมและไม่กระทบต่อผู้ตอบแบบสอบถามแต่อย่างใด

_____ ข้อมูลทั่วไปของบริษัท

กรุณาระบุความคิดเห็นของท่าน โดยทำเครื่องหมาย x ในช่องที่ตรงกับความคิดเห็นของท่านมากที่สุด

1. ตำแหน่งของผู้ให้ข้อมูล

☐ ระดับผู้บริหาร ☐ sz.li11v7malrigo ☐ Eirdnlnu ☐ Etui _____

2. ประเภทของธุรกิจ

☐ ผู้ส่งออกโดยตรง ☐ El Freight Forwarder

3. จำนวนชิปเมนต์ที่ส่งออกจากประเทศไทยต่อเดือน

☐ น้อยกว่า 15 ☐ 16-30 ☐ มากกว่า 50

☐ 31-50

4. กรุณาเรียงลำดับความสำคัญของปัจจัยในการเลือกใช้บริการสายเดินเรือ (1= สำคัญมากที่สุด, 7= สำคัญน้อยที่สุด)

_____ โครงสร้างพื้นฐาน

_____ ฝ่ายลูกค้าและบริการ

_____ การปฏิบัติการการขนส่ง 141St

_____ ตารางเรือ

_____ เทคโนโลยีและการสื่อสาร

ส่วนที่ 2: ปัจจัยในการเลือกใช้บริการของบริษัทเดินเรือ

กรุณาประเมินการให้บริการของบริษัท ABC โดยทำเครื่องหมายวงกลมลงบนตัวเลขที่ตรงกับความคิดเห็นของท่านมากที่สุด โดย 1 หมายถึง “ไม่เห็นด้วยอย่างยิ่ง” จนถึง 5 หมายถึง “เห็นด้วยอย่างยิ่ง”

คุณลักษณะ	ไม่เห็นด้วย อย่างยิ่ง		เห็นด้วย อย่างยิ่ง		
	1	2	3	4	5
5.1 บริษัท ABC เสนอ ค่าระวางเรือที่ถูกกว่าเมื่อเปรียบเทียบกับบริษัทสายเดินเรืออื่นๆ					
5.2 บริษัท ABC เสนอ ค่าระวางเรือที่พิเศษและมีส่วนลดที่มากกว่าเมื่อเปรียบเทียบกับบริษัทสายเดินเรืออื่นๆ					
5.3 ค่าระวางเรือที่บริษัท ABC เสนอมีความยืดหยุ่นและสามารถเจรจาต่อรองได้มากกว่าเมื่อเปรียบเทียบกับบริษัทสายเดินเรืออื่นๆ	1	2	3	4	5

5: ควรระวังเรื่อง	ไม่เห็นด้วย อย่างยิ่ง		ไม่เห็นด้วย		เห็นด้วย อย่างยิ่ง	
5.4 ค่าใช้จ่ายท้องถิ่นที่เสนอโดยบริษัท ABC มีราคาถูกกว่าเมื่อเปรียบเทียบกับบริษัท สายเดินเรืออื่นๆ (B/L, THC, Seal)	1	2	3	4	5	
6 ฝ่ายลูกค้าและเรือ	ไม่เห็นด้วย อย่างยิ่ง		ไม่เห็นด้วย			
6.1 ฝ่ายลูกค้าและบริการของบริษัท ABC มีความสนใจและใส่ใจต่อตัวลูกค้ามากกว่า เมื่อเปรียบเทียบกับบริษัทสายเดินเรืออื่นๆ	1	2	3	4	5	
6.2 ฝ่ายลูกค้าและบริการของบริษัท ABC มีการตอบสนองที่รวดเร็วกว่าเมื่อเปรียบเทียบกับ บริษัทสายเดินเรืออื่นๆ						
6.3 ฝ่ายลูกค้าและบริการของบริษัท ABC มีความน่าเชื่อถือและสามารถไว้วางใจได้ มากกว่าเมื่อเปรียบเทียบกับบริษัทสายเดินเรืออื่นๆ	1	2	3	4	5	
6.4 ความสัมพันธ์ของฝ่ายลูกค้าและบริการของบริษัท ABC และบริษัทของคุณเป็นไป ด้วยดีเมื่อเปรียบเทียบกับบริษัทสายเดินเรืออื่นๆ	1	2	3	4	5	
7 เกิด ปฏิบัติการเรือของบริษัท	ไม่เห็นด้วย อย่างยิ่ง		ไม่เห็นด้วย			
7.1 จำนวนคำร้องทุกข์ของการจัดการฝ่ายปฏิบัติการของบริษัท ABC มีน้อยกว่าเมื่อ เปรียบเทียบกับบริษัทสายเดินเรืออื่นๆ	1	2	3	4	5	
7.2 การจัดการฝ่ายปฏิบัติการของบริษัท ABC มีความปลอดภัยสูงกว่าเมื่อเปรียบเทียบกับ บริษัทสายเดินเรืออื่นๆ	1	2	3	4	5	
7.3 ระดับของความเสียหายและการสูญหายของการบริการของบริษัท ABC มีน้อยกว่า เมื่อเปรียบเทียบกับบริษัทสายเดินเรืออื่นๆ	1	2	3	4	5	
8 ข้อเสีย	ไม่เห็นด้วย อย่างยิ่ง		ไม่เห็นด้วย			
8.1 การบริการของบริษัท ABC มีคุณภาพดีกว่าเมื่อเปรียบเทียบกับบริษัทสายเดินเรือ อื่นๆ	1	2	3	4	5	
8.2 สมรรถภาพของพนักงานและความรู้ในการปฏิบัติงานของบริษัท ABC มีความ น่าเชื่อถือมากกว่าเมื่อเปรียบเทียบกับบริษัทสายเดินเรืออื่นๆ	1	2	3	4	5	
8.3 ชั่วโมงการให้บริการต่อหนึ่งวันของบริษัท ABC ยาวนานกว่าเมื่อเปรียบเทียบกับ บริษัทสายเดินเรืออื่นๆ	1	2	3	4	5	
9 โครงสร้าง พบรอบ	ไม่เห็นด้วย อย่างยิ่ง		ไม่เห็นด้วย			
9.1 สภาพของตู้คอนเทนเนอร์ที่จัดให้โดยบริษัท ABC มีสภาพดีกว่าเมื่อเปรียบเทียบกับ บริษัทสายเดินเรืออื่นๆ	1	2	3	4	5	
9.2 บริษัท ABC สามารถจัดหาตู้คอนเทนเนอร์แบบพิเศษให้ได้ดีกว่าเมื่อเปรียบเทียบกับ บริษัทสายเดินเรืออื่นๆ	1	2	3	4	5	
9.3 บริษัท ABC สามารถจัดหาตู้คอนเทนเนอร์แบบให้ได้ดีกว่าเมื่อเปรียบเทียบกับบริษัท สายเดินเรืออื่นๆ	1	2	3	4	5	

ข้อ ๑๑	ข้อ ๑๒	ไม่เห็นด้วยเลย	ไม่เห็นด้วย	เห็นด้วย	เห็นด้วยอย่างยิ่ง
10.1 การเดินเรือของสายเรือบริษัท ABC มีความน่าเชื่อถือดีกว่าเมื่อเปรียบเทียบกับบริษัทสายเดินเรืออื่นๆ		2	3	4	
10.2 ระยะเวลาการเดินเรือของสายเรือบริษัท ABC มีความน่าเชื่อถือดีกว่าเมื่อเปรียบเทียบกับบริษัทสายเดินเรืออื่นๆ		2		4	
10.3 ความถี่ของการเดินเรือต่อหนึ่งอาทิตย์ของสายเรือบริษัท ABC มีมากกว่าเมื่อเปรียบเทียบกับบริษัทสายเดินเรืออื่นๆ	1	2			
10.4 ตารางการเดินเรือของสายเรือบริษัท ABC มีความยืดหยุ่นในเรื่องการขึ้นต้นที่มากกว่าเมื่อเปรียบเทียบกับบริษัทสายเดินเรืออื่นๆ		2	3		
10.5 บริษัท ABC มีการบริการในระยะเวลาการเดินเรือที่สั้นกว่าเมื่อเปรียบเทียบกับบริษัทสายเดินเรืออื่นๆ		2	3	4	
11.1 การประกาศแจ้งข้อมูลการบริการเส้นทางใหม่ผ่านทางเว็บไซต์ของบริษัท ABC มีความรวดเร็วกว่าเมื่อเปรียบเทียบกับบริษัทสายเดินเรืออื่นๆ				4	5
11.2 การติดตามข้อมูลของการส่งสินค้าของบริษัท ABC เป็นปัจจุบันเมื่อเปรียบเทียบกับบริษัทสายเดินเรืออื่นๆ					5
11.3 เอกสาร(B/L, ใบแจ้งหนี้, ใบรับรอง) ของบริษัท ABC มีความถูกต้องมากกว่าเมื่อเปรียบเทียบกับบริษัทสายเดินเรืออื่นๆ		2	3	4	5

ความตั้งใจในการเลือกใช้บริการสายเดินเรือของลูกค้า

กรุณาประเมินความตั้งใจในการเลือกใช้บริการของบริษัท ABC โดยทำเครื่องหมายวงกลมลงบนตัวเลขที่ตรงกับความเห็นของท่านมากที่สุด โดย 1 หมายถึง "ไม่เห็นด้วยอย่างยิ่ง" จนถึง 5 หมายถึง "เห็นด้วยอย่างยิ่ง"

ข้อ ๑๓	ข้อ ๑๔	ไม่เห็นด้วยเลย	ไม่เห็นด้วย	เห็นด้วย	เห็นด้วยอย่างยิ่ง
12.1 ท่านจะเลือกการบริการของบริษัท ABC เป็นอันดับแรก					
12.2 ท่านจะสนับสนุนให้บริษัทอื่นๆมาใช้บริการกับบริษัท ABC					
12.3 ท่านจะรักษ ปริมาณการใช้บริการกับบริษัท ABC ต่อไป					

ขอขอบคุณสำหรับความร่วมมือในการตอบแบบสอบถามนี้



APPENDIX C

Data Analysis Result

Reliability Result

a) Freight rates

Case Processing Summary

		N	%
Cases	Valid	50	100.0
	Excluded	0	.0
	Total	50	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.776	4

Item Statistics

	Mean	Std. Deviation	N
RAT1	3.4400	.76024	50
RAT2	3.3400	.74533	50
RAT3	3.6000	.80812	50
RAT4	3.4600	.97332	50

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
RAT1	10.4000	3.959	.664	.683
RAT2	10.5000	3.888	.715	.660
RAT3	10.2400	4.145	.531	.747
RAT4	10.3800	3.832	.463	.801

b) Customer service

Case Processing Summary

		N	
Cases	Valid	50	100.0
	Excluded	0	.0
	Total	50	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.864	4

Item Statistics

	Mean	Std. Deviation	N
CUS1	3.8600	.72871	50
CUS2	3.7400	.85261	50
CUS3	3.7200	.80913	50
CUS4	3.8800	.87225	50

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
CUS1	11.3400	4.841	.692	.836
CUS2	11.4600	4.417	.683	.839
CUS3	11.4800	4.296	.788	.795
CUS4	11.3200	4.304	.698	.833

c) Operation

Case Processing Summary

		N	
Cases	Valid	50	100.0
	Excluded'	0	.0
	Total	50	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.759	3

Item Statistics

	Mean	Std. Deviation	N
OPE1	3.5400	.76158	50
OPE2	3.6800	.68333	50
OPE3	3.7400	.80331	50

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
OPE1	7.4200	1.759	.539	.735
OPE2	7.2800	1.920	.549	.724
OPE3	7.2200	1.440	.696	.546

d) Reputation

Case Processing Summary

		N	%
Cases	Valid	50	100.0
	Excluded	0	.0
	Total	50	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.816	3

Item Statistics

	Mean	Std. Deviation	N
REP1	3.6600	.74533	50
REP2	3.8200	.77433	50
REP3	3.6800	.84370	50

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
REP1	7.5000	2.133	.647	.770
REP2	7.3400	2.066	.643	.773
REP3	7.4800	1.765	.722	.691

e) Infrastructure

Case Processing Summary

		N	%
Cases	Valid	50	100.0
	Excluded'	0	.0
	Total	50	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.789	3

Item Statistics

	Mean	Std. Deviation	N
INF1	3.6800	.74066	50
INF2	3.8400	.81716	50
INF3	3.5800	.90554	50

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
INF1	7.4200	2.453	.558	.787
INF2	7.2600	2.156	.614	.730
INF3	7.5200	1.724	.737	.589

f) Schedule

Case Processing Summary

			%
Cases	Valid	50	100.0
	Excluded'	0	.0
	Total	50	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.824	5

Item Statistics

	Mean	Std. Deviation	N
SCH1	3.8400	.79179	50
SCH2	3.5600	.73290	50
SCH3	3.6800	.71257	50
SCH4	3.7600	.87037	50
SCH5	3.6800	.74066	50

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SCH1	14.6800	5.896	.578	.802
SCH2	14.9600	5.753	.698	.768
SCH3	14.8400	6.219	.568	.804
SCH4	14.7600	5.533	.599	.798
SCH5	14.8400	5.811	.668	.776

g) IT and Communication

Case Processing Summary

		N	
Cases	Valid	50	100.0
	Excluded	0	.0
	Total	50	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.767	3

Item Statistics

	Mean	Std. Deviation	N
ITO1	3.5800	.85928	50
ITO2	3.4400	.83690	50
ITO3	3.7400	.82833	50

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
TO1	7.1800	2.314	.496	.802
ITO2	7.3200	1.814	.814	.429
ITO3	7.0200	2.347	.519	.774

Multiple Regressions Result

Hypotheses 1

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	ITO, RAT, CUS, OPE, REP, INF, SCH	.	Enter

a. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	Q2 = Direct Shipper (Selected)			
1	.796 ^a	.633	.597	.34072

a. Predictors: (Constant), ITO, RAT, CUS, OPE, REP, INF, SCH

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.235	7	2.034	17.518	.000 ^a
	Residual	8.242	71	.116		
	Total	22.478	78			

a. Predictors: (Constant), ITO, RAT, CUS, OPE, REP, INF, SCH

b. Dependent Variable: INT

c. Selecting only cases for which Q2 = Direct Shipper

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	99.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	.279	.370		.755	.453	-.699	1.258
RAT	.028	.074	.034	.372	.711	-.169	.224
CUS	.129	.089	.137	1.454	.150	-.106	.364
OPE	-.030	.116	-.025	-.253	.801	-.338	.279
REP	.374	.115	.395	3.241	.002	.068	.679
INF	-.024	.124	-.024	-.195	.846	-.353	.305
SCH	.400	.157	.327	2.541	.013	-.017	.817
ITO	.073	.088	.082	.834	.407	-.160	.307

a. Dependent Variable: INT

b. Selecting only cases for which Q2 = Direct Shipper

Hypotheses 2

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	ITO, RAT, INF, REP, OPE, CUS, SCH		. Enter

a. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	Q2 = Freight Forwarder (Selected)			
1	.700 ^a	.490	.474	.30869

a. Predictors: (Constant), ITO, RAT, **INF**, REP, OPE, CUS, SCH

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	19.787	7	2.827	29.664	.000 ^a
Residual	20.583	216	.095		
Total	40.370	223			

a. Predictors: (Constant), ITO, RAT, INF, REP, OPE, CUS, SCH

b. Dependent Variable: INT

c. Selecting only cases for which Q2 = Freight Forwarder

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	99.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	.662	.226		2.931	.004	-.075	1.248
RAT	.095	.064	.090	1.481	.140	-.071	.260
CUS	.074	.061	.086	1.220	.224	-.084	.233
OPE	.146	.065	.160	2.259	.025	-.022	.314
REP	.188	.071	.187	2.633	.009	.002	.373
INF	.110	.063	.117	1.758	.080	-.053	.273
SCH	.185	.075	.188	2.480	.014	-.009	.379
ITO	.060	.061	.065	.973	.331	-.100	.220

a. Dependent Variable: INT

b. Selecting only cases for which Q2 = Freight Forwarder

Independent Sample T Test

Hypotheses 3

Group Statistics				
Q2	N	Mean	Std. Deviation	Std. Error Mean
RAT Direct Shipper	79	3.2057	.65993	.07425
	224	3.3694	.40522	.02708
CUS Direct Shipper	79	3.8481	.56955	.06408
	224	4.1105	.48902	.03267
OPE Direct Shipper	79	3.5697	.44789	.05039
	224	3.6530	.46654	.03117
REP Direct Shipper	79	3.6668	.56783	.06389
	224	3.7176	.42403	.02833
INF Direct Shipper	79	3.5485	.53732	.06045
	224	3.5269	.45143	.03016
SCH Direct Shipper	79	3.5949	.43908	.04940
	224	3.7080	.43184	.02885
ITO Direct Shipper	79	3.3675	.60263	.06780
	224	3.8158	.46009	.03074

	Levene's Test for Equality of Variances	t-test for Equality of Means						
							99% Confidence Interval of the Difference	
				Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
RAT	Equal variances assumed	32.889	.000	.000	-.16372	.06337	-.32799	.00054
	Equal variances not assumed			.041	-.16372	.07903	-.37127	.04382
CUS	Equal variances assumed	1.058	.305	.000	-.26239	.06688	-.43574	-.08902
	Equal variances not assumed			.000	-.26239	.07193	-.45068	-.07415
OPE	Equal variances assumed	.085	.771	.160	-.08324	.06043	-.23988	.07339
	Equal variances not assumed			.162	-.08324	.05925	-.23795	.07146
REP	Equal variances assumed	4.682	.034	.405	-.05080	.06092	.20872	.10713
	Equal variances not assumed			.489	-.05080	.06989	.23398	.13239
INF	Equal variances assumed	2.129	.146	.728	.02161	.06218	-.18958	.18279
	Equal variances not assumed			.750	.02161	.06756	-.15525	.19846
SCH	Equal variances assumed	.157	.692	.077	-.111310	.05675	-.26022	.03402
	Equal variances not assumed			.050	-.111310	.05721	-.26258	.03638
TTO	Equal variances assumed	11.438	.000	.000	.44834	.06511	-.61826	.24841
	Equal variances not assumed			.000	.4834	.07414	.64342	.28925